THE EFFECTS OF SOCIAL COMPARISONS ON HAPPINESS
IN A MOTIVATIONAL CONTEXT

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by

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CHAPTER 1

INTRODUCTION

The American culture is marked by an emphasis on wealth, fame and beauty. Part of the highly lauded American dream is the unspoken promise that everyone has the opportunity to be successful in these areas. It is difficult for individuals not successful in these domains to consider the lives of those who have succeeded as anything less than ideal. We think to ourselves that they must be completely happy, living in big houses with expensive possessions, the recipients of public admiration and praise. Respective to wealth alone, research linking relative wealth and happiness demonstrates a modest correlation between financial success and subjective well-being or SWB (Diener & Biswas-Diener, 2002). In terms of image, perceptions of body image have been found to be positively correlated with happiness across three age groups of women (Stokes & Frederick-Recascino, 2003). Despite this modest relationship between wealth, image and happiness, other research indicates that personal emphasis placed on striving for these goals may actually be harmful to an individual’s SWB, a concept synonymous with happiness. Previous research has reported a negative relationship between striving towards such goals and SWB, and is often presented in contrast to positive correlations between SWB and goals that are more congruent with basic human needs (Kasser & Ryan, 1993, 1996; Schmuck, Kasser & Ryan, 2000; Schmuck, 2001).
It is important to note that it is not success at these goals that has been related to lower SWB, but rather the emphasis placed on striving to achieve them. This manuscript deals with two empirically established types of motivation, extrinsic and intrinsic. Extrinsic goals are defined as goals that depend on the contingent reactions of others (Kasser & Ryan, 1996). The three extrinsic goals most frequently studied are financial success (wealth), social recognition (fame), and appealing appearance (image). It has also been noted that pursuing extrinsic goals is most likely a means to a different end, an indirect way of achieving personal satisfaction. In other words, the intended result of these goal-oriented behaviors is not necessarily the direct outcomes of those behaviors, but an indirect bolstering of a different outcome, such as self-esteem. Comparatively, intrinsic goals are defined as expressive of desires congruent with self-actualization and growth tendencies inherent in humans (Kasser & Ryan, 1996). Typical intrinsic goals include community feeling, physical fitness, affiliation, and self-acceptance. Intrinsic goal striving is oriented towards satisfying basic psychological needs and is pursued for the very end of the goal itself. It is important to note that when using these definitions, extrinsic goals are defined in terms of social differences through external cues and feedback while intrinsic goals are defined in terms of where the drive comes from or how a goal is originally conceived.

Extrinsic and intrinsic motivational striving are often presented in contrast to one another. However, conceptually these two types of goals may invoke the adage of comparing apples to oranges, because the benchmarks of success employed in these two types of goals may be qualitatively different. For example, one of the most extensively
studied extrinsic goals has been wealth, possibly the most salient of the American dreams. The very definition of wealth is one of contrast. In order for a person to appear “wealthy” there has to be someone in his or her available comparison space with less money or resources. If everyone had an equal sum of money, even an exorbitantly large one by today’s standards, then no one would be wealthy. It is the social contrast that defines wealth as well as other extrinsic goals. Thus, social comparison is an inseparable component of the assessment of success and progress for extrinsic motivation. On the other hand, intrinsic goals such as personal growth, are evaluated within the individual and levels of perceived success are unlikely to change based on the environment. Intrinsic goals are thought to focus on the social and interpersonal needs of an individual (Kasser & Ryan, 1996), rather than possible advantage within society. Intrinsic motivation is also characterized as a drive originating from within an individual, without externally imposed forces (Ryan & Deci, 2000), suggesting that there would be none or very little interaction between this type of striving and an individual’s attending to social feedback.

Despite these connections, no research has examined how intrinsic and extrinsic motivations are associated with the use of social comparison information. The present study examines possible functional differences between intrinsic and extrinsic motivation in regards to how success is evaluated in terms of social comparisons and how this impacts happiness as a result of goal striving. This manuscript begins by detailing the concept of SWB, and then examines research suggesting that the two types of goals have divergent associations with SWB. Building on that, the difference between comparison styles of intrinsic and extrinsic goals is discussed with respect to SWB outcomes. Finally,
results from the current study assessing the influence social comparison has on motivation related happiness are presented and discussed before considering future implications.

Subjective Well-Being

In simple terms, subjective well-being can be referred to as an individual’s level of happiness. Traditionally, SWB has been assessed as a composite of life satisfaction, high positive affect, and low negative affect (Diener, Suh, Lucas & Smith, 1999). Thus, SWB is a combination of general life satisfaction in addition to daily mood. Diener and colleagues contend that, “subjective well-being is a broad category of phenomena that includes people’s emotional responses, domain satisfactions, and global judgments of life satisfaction” (pg. 277). The concept of domain satisfactions relates to a person’s evaluations of success on valued goals. From a purely goal content satisfaction perspective, successful attainment of valued goals should lead to greater life satisfaction and positive affect, and thus higher levels of SWB. However, as I describe in the following sections, research suggests that the degree to which the attainment of a goal will lead to well-being may depend on the nature of the goal itself, with some goals being more inherently rewarding than others.

Within the broader concept of well-being there are two differing theories of happiness (Ryan & Deci, 2001). The first is labeled hedonism, in which happiness comes from satisfaction of pleasure drives. While this is not necessarily the classical view of hedonism focusing on satisfaction of physical pleasures, it does refer to a worldlier happiness. The hedonic view has incorporated a broad conception of hedonism that has
expanded to include the pleasures of the mind as well as the body (Kubovy, 1999), and could be expanded to include financial successes, attention garnered from one’s peers for being attractive and portraying a desirable image, or even the simple satisfaction of being surrounded with pleasurable stimuli. The second type, eudaimonic well-being, is the actualization of human potentials that goes beyond material happiness, referring to the realization of one’s natural potential that leads to a greater and more holistic sense of well-being. This construct centers on a more ingrained concept of psychological needs. According to this view, a person is most happy when their inner needs are satisfied. While the drive to achieve both kinds of well-being may originate from within a person, hedonic well-being is satisfied by environmental stimuli and the pursuit and satisfaction of relatively fleeting desires, while eudaimonic well-being is a satisfaction of more internal, enduring human needs. These two ideas of happiness seem to align themselves with different motivational styles, specifically hedonism with extrinsic motivation, and eudaimonism with intrinsic motivation. While neither theory of happiness has been shown to be particularly faulty, there are theorists who suggest that hedonic striving may be self-defeating (Fromm, 1981). More precisely, eudaimonic theorists such as Ryan and Deci (2001) argue that some experiences we initially perceive to be pleasurable may not in the end contribute to well-being, and instead become harmful because they are superficial and unfulfilling. However, a question that heretofore remains unexamined is whether basic social processes such as how people use social comparison information to evaluate success in valued goals may shed light on why extrinsic goals are typically associated with lower levels of life satisfaction than intrinsic goals.
Goal Research

Previous research demonstrating the relationship between motivational style and happiness provides the impetus for observing comparison processes in this context. In Kasser & Ryan (1996), participants completed a number of well-being measures including self-actualization, vitality and depression. Participants also reported the extent that they strove towards intrinsic and extrinsic goals using the Aspiration Index (Kaser & Ryan, 1993). Results showed that extrinsic goal striving was negatively correlated with each of the well-being measures, whereas intrinsic goal striving was positively related to them. Results were consistent across two studies with the second study adding an emotion measure, which showed a strong negative correlation between extrinsic goals and happiness. This relationship has since been replicated in other samples (Kasser, 2002). Kasser (2002) also noted that participants who rate one extrinsic goal as important are likely to rate other extrinsic goals as important, suggesting that there may be a more dispositional component to people’s pursuit of extrinsic v. intrinsic goals.

Individuals that strive to succeed at extrinsic goals may be more likely to be motivated by how they compare to their peers, and this motive may have a large impact on happiness related to goal striving. Similar to Ryan and Deci (2000), Srivastava and colleagues (2001) contended that the motive behind goal striving plays an important role, and that some motives are detrimental to an individual’s well-being. Using a sample of business students, it was found that within wealth striving, the more extrinsic motives of showing off and overcoming self-doubt had a negative relationship with SWB. These motives are not consistent with a financial success and security concept of wealth, but
rather the desire to use money as a way to present oneself above his or her peers. By way of comparison, the more intrinsic motives of security and family support were shown to be positive factors. This shows that it is possible to identify the specific motives within an extrinsic goal that lead to negative well-being. Srivastava et al. (2001) also provides us with an idea of the frequency of individual motives for attaining wealth, by factor-analyzing the many motives reported by business students. The factor accounting for the most variance (29%) was the motive of social comparison, followed by the motive of pride (13%), which emerged as a positive factor. Because social comparisons present themselves as both a powerful motivating factor and a detriment to happiness within wealth striving, it is important to understand the role that social comparisons may play in influencing well-being in the context of other extrinsic motivations.

Social Comparison, SWB, and Self-concepts

Festinger’s (1954) original theory of social comparison detailed how individuals will turn to social comparisons for self-relevant information when it is lacking in the environment. Festinger proposed that we engage in social comparisons in order to evaluate our own abilities and opinions against those of others. Since Festinger’s original theory was proposed, an abundance of research has examined the connections between social comparison and happiness. It has been generally assumed that upward comparisons (those comparing the self to someone better off on a particular domain) can lead to increased negative emotions, including jealousy (Salovey & Rodin, 1984), frustration (Martin, 1986), and lowered self-evaluations (Marsh & Parker, 1984). More specifically, upward comparisons in ability domains have been shown to lead to decreased happiness
(Pleban & Tesser, 1981). Seta, Seta and McElroy (2006) also found that increased disparity between upward comparison targets within competitive domains was associated with increased negative affect. In contrast, downward comparisons (those comparing the self with someone worse off) typically enhance well-being (Wills, 1981; Wood, Taylor & Lichtman, 1985).

It is possible that in extrinsic goals, social comparisons provide a larger portion of the information dictating success or failure than in intrinsic goals. Extrinsic goal related social comparisons would provide feedback that is seeking to inform the comparer that he or she is in a position above his or her peers. This is different than the information gathering done to construct a conceptual norm against which people evaluate the appropriateness of their opinions or relative abilities. Downward comparisons would yield perceptions of success, since the individual is relatively better than their peers (more beautiful, wealthier, etc.), whereas upward comparisons would lead to perceptions of failure. However, society is full of constant reminders of the level of success one is both able to attain and may never attain. For individuals who place an emphasis on extrinsic values, the possibility of achievement is most likely the impetus for striving early on. In this way upward comparisons can be both inspiring and deflating (Taylor & Lobel, 1989). If a person is constantly making upward social comparisons, then in their cognitive framework they will always be less successful than someone instead of more successful than others.

The need for flattering social comparisons within extrinsic domains may not be evident in intrinsic domains. Diener & Fujita (1997) asked participants to rate themselves
on 20 personal characteristics that were generally reflective of intrinsic concerns, and also to rate others that they frequently compare themselves to. They found that when making social comparisons, individuals who felt satisfied and scored themselves highly on a personal characteristic also rated their perception of others’ levels in that domain as high. These results are more compatible with an assimilation or group identity effect, where individuals considering intrinsic dimensions compared themselves with similar others. In other words, when making social comparisons in domains that would be labeled as more intrinsic, individuals may tend to think of themselves as average. This does not mean average in terms of a conceptual median, but rather in line with most other individuals. It is possible that this comfort with being similar is what Festinger (1954) was talking about when he claimed that social comparisons would lead to conformity. The difference is that in this case, an individual is not conforming to a perceived norm, but instead either seeking out similar others or cognitively construing their perceptions of the norm around themselves. In other words, social comparisons may not be a necessary part of judging one’s degree of success in intrinsic goal contexts.

It is possible that the normalizing function of social-comparisons aids in the SWB benefits of intrinsic goals by not introducing the need for flattering social comparisons necessary in extrinsic striving, a need that can often be hard to satisfy. As a person progresses along intrinsic goals, they compare their new level to their previous level. If benefits are made then the result is a feeling of satisfaction. The centering of perceived norms at an individual’s own level may be the consequence of a strictly inward focus in terms of intrinsic motivation. Essentially, the self constructs that are often the outcome of
intrinsic goal striving, are assessed through temporal and intrapersonal comparisons as opposed to social comparisons (Wilson & Ross, 2000). Social comparisons on intrinsic dimensions may not even occur naturally, and when experimentally elicited participants reply with whatever is on their mind, primarily their own intrinsic progress. With regards to happiness, changes in comparison direction may not even affect happiness as a result of intrinsic striving.

Current Study

Because extrinsic motivations are socially defined and evaluated, satisfaction with one’s attainment of an extrinsic goal should be especially likely when a person is able to make downward comparisons with others, but less likely when a person cannot. In contrast, satisfaction with one’s attainment of an intrinsic goal should not be so closely tied to how others have performed. The purpose of the current study is to experimentally manipulate social comparison processes in order to understand how comparison processes influence judgments of satisfaction in the context of both intrinsic and extrinsic goals. The current study was designed to compare the expected levels of happiness participants claim they would experience after events characterized by combinations of the factors of motivational type (extrinsic vs. intrinsic), level of success (success vs. failure) and comparison direction (downward vs. lateral). Using a series of vignettes, participants were asked to imagine themselves in certain goal relevant situations and then report how happy they think they would be in such a situation. Naturally participants are expected to predict significantly more happiness after successes than failures in general. This expectation serves as the baseline for evaluating all other hypotheses. In order to
examine the claim that social comparisons are part of extrinsic goal satisfaction and resulting happiness, and that intrinsic satisfaction are distinct from extrinsic motivations by not relying on social comparisons, the following hypotheses are proposed:

**Hypothesis 1:** The tendency to report engaging in social comparisons will be correlated with the importance one places on extrinsic goals but not with the importance one places on intrinsic goals. This hypothesis will be tested by comparing the correlations between self-report measures of one’s tendency to engage in social comparisons, intrinsic goal strivings, and extrinsic goal strivings.

**Hypothesis 2:** Social comparisons will have a greater effect on anticipated happiness in extrinsic contexts as compared to intrinsic contexts. This will produce a significant 2-way Comparison x Motivation interaction on participants’ reports of expected happiness in the scenarios.

**Hypothesis 3:** In the success scenarios, levels of expected happiness for extrinsic motivation will be lower than expected levels of happiness for intrinsic motivations following lateral comparisons. This is due to a lack of downward social comparisons in this extrinsic condition, believed to be a significant portion of extrinsic goal success.

**Hypothesis 4:** In the failure scenarios, extrinsic related happiness will be higher than intrinsic related happiness following downward comparisons. This would demonstrate happiness benefits of downward social comparison that functions separately from the actual level of success.
CHAPTER 2

METHOD

Participants

The sample consisted of 135 students (95 male, 40 female, Mean age = 19.3) recruited from a general psychology course at a Midwest university, with 80% reporting Caucasian ethnicity, 11.9% reporting African-American ethnicity, and the remaining 8.9% distributed evenly across other ethnicities. Participants signed up to participate in the study using an online form and received course credit for their participation. Before participation in the study informed consent was obtained from all participants. No persons recruited declined participation.

Design

This study looked at the interactions between goal striving (extrinsic vs. intrinsic), social comparisons related to goal striving (downward vs. lateral), and outcomes (success vs. failure) in goal striving as they related to expected happiness in hypothetical scenarios. Each variable contained two levels, thus creating a 2x2x2 factorial design. This design was implemented using a series of 8 vignettes that represented all combinations of the three factors.
Procedure

After signing the consent form, participants were seated in front of one of three computers in the room allocated for data collection. The experimenter began the Media Lab program, which then conducted the rest of the procedure. In the first part, participants were presented with eight vignettes and expected happiness scores were collected for each vignette. In the second part, participants filled out measures of dispositional goal striving and social comparison orientation. In the third part, participants reported demographic information. Participants were typically debriefed as a group (unless they finished at different times) and were given a chance to respond and provide feedback.

Materials

The vignettes themselves were written in order to present situations involving goal striving to the participant that they were asked to imagine as describing an event in their lives. Eight vignettes were presented to each participant, with the content of each vignette randomly selected from two possible goal contents depending on the motivation type of the vignette. For example, extrinsic vignettes had an equal chance of dealing with either image or wealth, while intrinsic vignettes had an equal chance of dealing with either relationships or personal growth. The order of the 8 vignettes was also randomized. Each vignette described a goal striving scenario in which the participant either failed or succeeded, and also described whether other individuals pursuing the same goal either failed or succeeded as well.
Because the content of one of two intrinsic scenarios dealt specifically with personal relationships, care was taken to minimize the extent of personal relationships described in all other scenarios. Thus, terms such as “co-worker” and “neighbor” were used instead of “friends” and “family” in all scenarios except those specifically dealing with personal relationships in order to minimize any possible confounding of condition.

Measures

*Expected happiness* for each scenario was measured using a single item that asked “If this scenario described an event in your life, how happy would you be?” Participants responded using a 7-point Likert scale with 1 being the least happy and 7 being the most.

*Dispositional goal striving* was measured using an abridged version of the Aspiration Index (Kasser & Ryan, 1996). The original Aspiration Index asks participants to answer 3 questions (how important, how likely is success, how much have you attained) about three intrinsic goals (personal growth, relationships, community feeling), three extrinsic goals (wealth, image, physical appearance), and one goal that has not been reliably tied to either (health). In our study, the scale was abridged so that we only asked participants to rate the importance they placed on each of two intrinsic (personal growth, relationships) and two extrinsic (wealth, image) goals. These goals were selected because they corresponded to the content of the vignettes. Participants were presented with five specific items for each of the four goals (a total of twenty items) and asked to indicate using a 7-point Likert scale the degree to which each goal was important to them.
in their daily lives. Responses were then added together to create composite scores for each of the motivations, and the extrinsic and intrinsic motivations were added together to create composite extrinsic striving importance ($\alpha = .91$) and intrinsic striving importance ($\alpha = .75$) scores.

Social comparison orientations or SCO, which are dispositional tendencies to compare one’s self with others, were measured using the Iowa-Netherlands Comparison Orientation Measure (INCOM) (Gibbons & Buunk, 1999). Using a 5-point Likert Scale participants rated the degree to which they agreed with statements such as, “I often compare how I am doing socially with other people”. There were a total of 11 items, and scores were averaged together after reverse coding items 5 and 11 (ex, “I am not the type of person who compares often with others”) to create a SCO score. In the original sample of Gibbons & Buunk (1999) an alpha coefficient of .83 was reported, whereas the alpha coefficient was only .55 in the current study sample.

Overview of Analyses

Hypotheses were tested using one of four statistical methods. Correlations were used to examine the relationships between motivational striving and dispositional social comparison orientation. Simple descriptive statistics and bivariate correlations were conducted for the motivation scores validate that the relationship between them was similar to previous studies (Kasser & Ryan, 1993; 1996). Multiple regression was also used to this end in order to control for shared variance. Effects of the three experimental factors were analyzed using repeated measures ANOVA, with success, motivation style,
and comparison direction put in as three different factors with two levels each. Dependent variables in these analyses were the expected happiness ratings reported after each of the eight vignettes. This repeated measures ANOVA specifically tested for the Comparison x Motivation interaction mentioned in Hypothesis 2 and the differences in happiness means predicted by Hypotheses 3 and 4. Finally, paired sample t-tests were used to further test differences between happiness means predicted in Hypotheses 3 and 4.
CHAPTER 3

RESULTS

Preliminary Analyses

Descriptive statistics are reported for motivational striving, SCO, and expected happiness, as well as demographics (Table 1). Participants indicated significantly more importance placed on intrinsic (M = 6.59) striving than extrinsic striving (M = 4.49) (t = -20.71, SE = .10, p = .003). Greater importance placed on intrinsic motivation was reported previously (Kasser & Ryan, 1996), although scores for the current sample are numerically higher. Nevertheless, the current sample reported expected differences in goal importance.

In order to control for possible confounds caused by demographic variables, a series of regressions were conducted to determine any relationships with SCO, extrinsic importance and intrinsic importance. Each of these three variables was entered as the dependent variable with Age, Gender, and Ethnicity predicting. Due to the large number of participants reporting Caucasian ethnicity, the Ethnicity variable was dummy coded as reporting Caucasian (1) or not (0). None of the demographic variables were related with any of the three person level variables and were not included in subsequent analyses.
Table 1: **Sociodemographics and Target Variable Descriptive Statistics** (N = 135)

<table>
<thead>
<tr>
<th>Variables</th>
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<tbody>
<tr>
<td>Gender (%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>70</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>Range</td>
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<tr>
<td>Mean (SD)</td>
<td>19.3 (3.2)</td>
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<tr>
<td>Ethnicity (%)</td>
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</tr>
<tr>
<td>Caucasian</td>
<td>80</td>
</tr>
<tr>
<td>African American</td>
<td>11.9</td>
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<tr>
<td>Other</td>
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<tr>
<td>SCO</td>
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<tr>
<td>Extrinsic (importance)</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td>Intrinsic (importance)</td>
<td></td>
</tr>
<tr>
<td>Range</td>
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</tr>
<tr>
<td>Mean (SD)</td>
<td>6.59 (.42)</td>
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<tr>
<td>Prospective Happiness Means (SD)a</td>
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<tr>
<td>FDE</td>
<td>3.83 (1.44)</td>
</tr>
<tr>
<td>FDI</td>
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</tr>
<tr>
<td>FLE</td>
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<tr>
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<tr>
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<td>6.19 (1.08)</td>
</tr>
<tr>
<td>SLI</td>
<td>6.20 (1.20)</td>
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</table>

*a The three letter acronyms refer to combinations of the 2x2x2 factorial design. 
S = success, F = failure, D = downward comparison, L = lateral comparison, 
E = extrinsic, I = intrinsic.*
The Relationship between Goal Striving and Social Comparison Orientation

In order to test Hypothesis 1, extrinsic motivation, intrinsic motivation and SCO were all entered into bivariate correlation analyses simultaneously. Hypothesis 1 predicted that social comparison orientation would correlate with importance scores for extrinsic goals but not intrinsic goals. SCO showed a moderate correlation between both intrinsic (r = .23, p > .01) and extrinsic striving (r = .24, p > .01). These correlations also showed that extrinsic and intrinsic importance scores were correlated (r = .25, p < .01). Correlations were also conducted between motivation importance scores and related expected happiness scores, as well as between SCO and all happiness scores. These correlations are displayed in Table 2, with the most notable relationships being between the motivation importance scores and the respective expected happiness scores (ex. correlation between intrinsic importance and FLI), as well as the correlations between SCO and each expected happiness scores.

A final regression was conducted to confirm the relationships suggested by the correlation analyses. SCO was entered as the dependent variables, with extrinsic and intrinsic importance as predictor variables. Results were similar to those of the correlation analyses, with both extrinsic (β = .19, t = 2.21, p = .029) and intrinsic importance (β = .19, t = 2.17, p = .032) predicting SCO.
<table>
<thead>
<tr>
<th>Condition</th>
<th>Extrinsic</th>
<th>Intrinsic</th>
<th>SCO</th>
</tr>
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<tbody>
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<td>.03</td>
<td>-.13</td>
<td>.03</td>
</tr>
<tr>
<td>FLE</td>
<td>.05</td>
<td>.05</td>
<td>.19*</td>
</tr>
<tr>
<td>SDE</td>
<td>.39**</td>
<td>.08</td>
<td>.19*</td>
</tr>
<tr>
<td>SLE</td>
<td>.19*</td>
<td>.27**</td>
<td>.12</td>
</tr>
<tr>
<td>FDI</td>
<td>.17</td>
<td>-.04</td>
<td>.19*</td>
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<td>SDI</td>
<td>.05</td>
<td>.07</td>
<td>.06</td>
</tr>
<tr>
<td>SLI</td>
<td>.11</td>
<td>.17</td>
<td>.11</td>
</tr>
<tr>
<td>α</td>
<td>.91</td>
<td>.75</td>
<td>.55</td>
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*Prospective Happiness levels are labeled the same as in Table 1.
* indicates p < .05
** indicates p < .01
Effects of Success and Comparison Direction on Goal Oriented Happiness

A 2 (goal outcome) x 2 (comparison direction) x 2 (goal content) repeated measures ANOVA was performed on the expected happiness levels reported after participants read the goal vignettes in order to test Hypotheses 2, 3 and 4. Mauchly’s test of sphericity was not significant, suggesting that the sphericity assumption for this sample was not violated. Because of the abundance of tests being performed at once, the results of this analysis were evaluated against a Bonferroni corrected alpha of .007. As expected, a main effect was found for goal outcome \[F(1,135) = 1446.74, p < .001\] with success scores (M = 6.01) being higher than failure scores (M = 2.96). Main effects were also found for comparison direction \[F(1,135) = 25.01, p < .001\] with downward (M = 4.67) being higher than lateral (M = 4.30), and goal content \[F(1,135) = 9.65, p = .002\] with extrinsic (M = 4.60) being higher than intrinsic (M = 4.37).

Hypothesis 2 predicted that social comparison direction will interact with goal outcomes for extrinsic motivation but not for intrinsic motivation. Repeated measures ANOVA analysis was used to confirm a significant Comparison x Goal interaction. Results from this ANOVA did find a significant two-way interaction for Comparison x Goal \[F(1,135) = 12.48, p = .001\]. An additional Outcome x Comparison \[F(1,135) = 108.27, p < .001\] was found, and the three-way interaction between factors was non-significant \(p > .10\). Figures 1a and 1b plot the results of the conducted repeated measures ANOVA, with separate plots for Outcome. Figure 2 displays the 2-way Comparison x Goal interaction averaged across Outcome. This figure demonstrates the increases in expected happiness following extrinsic vignettes, as compared to intrinsic...
Figure 1a. Success

Figure 1b. Failure
Figure 2. Comparison x motivation averaged across outcome.
vignettes. A paired sample t-test was used to verify that the observed difference between extrinsic and intrinsic in the downward condition is significant ($t = -4.65, p < .001$). Paired sample t-tests also verified that the difference between lateral-extrinsic and downward-extrinsic is significant ($t = -5.73, p < .001$), whereas the difference between lateral-intrinsic and downward-intrinsic was not ($p > .20$).

Hypothesis 3 predicted that in the success-lateral comparison condition, expected extrinsic happiness would be significantly lower than expected intrinsic happiness. Figure 1a suggests that this hypothesis was not confirmed by the results. A paired sample t-test compared the mean expected happiness scores for the success-lateral-extrinsic condition and the success-lateral-intrinsic condition. This test was not significant ($p > .10$), indicating that for this sample, expected extrinsic happiness was not significantly lower than intrinsic happiness in the success-lateral comparison condition.

Hypothesis 4 predicted that in the failure and downward comparison condition, expected extrinsic happiness would be significantly higher than intrinsic happiness due to the beneficial effects of downward comparisons on happiness in extrinsic goal striving. Figure 1b shows increases from lateral to downward comparisons for both extrinsic and intrinsic expected happiness. However, scores for expected extrinsic happiness appear to be significantly higher than expected intrinsic happiness. A paired sample t-test comparing the mean expected happiness scores for failure-downward-extrinsic and failure-downward-intrinsic, showed that expected extrinsic happiness was significantly higher than expected intrinsic happiness ($t = 3.84, p < .001$).
CHAPTER 4

DISCUSSION

The results of the study examined whether social comparisons behave differently within intrinsic and extrinsic motivations, and how these comparisons relate to happiness as a result of intrinsic and extrinsic striving. These results lend support to the hypothesized importance of social comparisons in happiness outcomes of extrinsic motivations, as compared to intrinsic motivations. The principle theory of this manuscript is that the social comparisons that are so important for evaluating extrinsic success can be both a method of satisfaction and frustration depending on available comparison targets. It was proposed that any negative relationship between extrinsic striving and happiness could be explained by the fact that extrinsic strivers were not making the types of comparisons that provide extrinsic goal satisfaction, with beneficial comparisons being partial criteria for success. Furthermore, tendency to compare oneself with others, or SCO, was expected to correlate with extrinsic striving but not intrinsic striving, thus reflecting the different ways these two types of motivation are validated. Downward comparisons were also expected to provide greater happiness benefits (when compared to lateral comparisons) for extrinsic motivation than for intrinsic motivation.

Hypothesis 1 predicted a significant relationship between SCO and extrinsic striving, but not intrinsic striving. Correlation and regression analyses showed a modest
relationship between SCO and both intrinsic and extrinsic motivation as reported by the
importance scale of the Aspiration Index. While the relationship between SCO and extrinsic motivation importance was expected, the relationship with intrinsic motivation was not. Social comparisons were expected to be related to extrinsic striving in contrast to not finding any relationship with intrinsic striving. Because an identical relationship with SCO was reported when both intrinsic and extrinsic motivation were entered into regression analyses at the same level, it is imprudent at this point to claim that either type of motivation accompanies a greater tendency to compare oneself with others. SCO, extrinsic striving, and intrinsic striving were all correlated with each other modestly, possibly suggesting that comparing oneself with others is associated with greater goal striving in general. Hypothesis 1 was neither supported nor disconfirmed, and it should be acknowledged that the alpha level for SCO was below the commonly accepted cut off value and lower than previously reported samples (Gibbons & Bunk, 1999). The poor reliability coefficient reported here could be due to the fact that the INCOM does not specify comparison direction. It is possible that an individual is capable of consistently making one type of comparison and not another. Changing the items presented in the INCOM to reflect different directions of comparisons through subscales would allow for a greater understanding of the relationship between goal striving importance scores and social comparison tendencies. Future testing should be conducted before that hypothesis can be properly confirmed or denied.

Using repeated measures ANOVA, a 2-way interaction was found between Comparison and Goal, as predicted in Hypothesis 2. The effects of this interaction are
displayed by the different slopes between lateral and downward comparisons for the two types of motivation. Across both the success and failure condition, happiness in the extrinsic and intrinsic scenarios were not significantly different following lateral comparisons. In the success condition, extrinsic downward comparisons do not differ significantly from lateral comparisons, while intrinsic downward comparisons were significantly lower than lateral comparisons. The drop in intrinsic expected happiness in the downward-success condition was not predicted. Possible causes for this drop in intrinsic expected happiness are discussed later in this section. In the failure condition, both intrinsic and extrinsic downward comparisons were higher than lateral comparisons. Extrinsic expected happiness rose at a greater rate than the intrinsic condition, and was significantly higher than intrinsic expected happiness following downward comparisons.

When averaged across Outcome, only extrinsic motivation displayed a significant difference between the lateral and downward condition, and happiness increases mirror those predicted by Wills (1981) and Wood, Taylor & Lichtman (1985). The lack of significant change for intrinsic motivation further confirms the claim that comparison direction does not affect intrinsic goal related happiness.

Hypothesis 3 predicted that when making lateral comparisons, participants would report lower expected happiness in extrinsic vignettes than they would in intrinsic vignettes. The theory behind this hypothesis was that previously reported negative relationships between extrinsic striving and well-being might be explained by finding a condition in which comparisons made within extrinsic domains yielded less happiness than in intrinsic domains. No significant difference was found between extrinsic and
intrinsic vignettes containing lateral comparisons. These results show that participants do not report expected happiness differences between the two types of motivation, and further research should be conducted to explore why extrinsic striving has been negatively related with well-being while intrinsic striving has not.

Hypothesis 4 predicted that in the failure condition, extrinsic related happiness will be higher than intrinsic related happiness following downward comparisons. This hypothesis was supported, and not only did expected happiness levels for the extrinsic condition rise significantly more than the intrinsic condition, but the mean for extrinsic downward comparisons in the failure condition approached an almost neutral level. This shows that even when failing, downward comparisons within extrinsic domains can result in feelings that are not entirely unpleasant. This result lends additional support to the claim that downward comparison may have an influence on extrinsic related happiness beyond any effects found for intrinsic related happiness.

Limitations

This study used a series of vignettes that participants were asked to read and imagine described events in their lives. Therefore, happiness measures collected following the vignettes reflect how a participant expects to feel rather than how they would actually feel if they experienced the situation in real life. This limits the real world applicability and is more suggestive than descriptive of what happens in everyday goal striving. Furthermore, all vignettes used were created for the purpose of this study. Due to time and resource constraints, believability and general quality was assessed with the help of undergraduate research assistants, rather than pilot subjects. A manipulation
check regarding the believability of vignettes before their use in this investigation would have aided in the confidence that can be placed on their effectiveness. Pilot soliciting of real life examples from cohorts of this sample may have also supplied more realistic vignettes that would have enhanced construct validity. Although the current study was a laboratory controlled experimental paradigm looking at expected happiness, the study was successful at demonstrating the greater impact of social comparisons on extrinsic striving as compared to intrinsic striving.

Since this is a first attempt at manipulating social comparisons in goal striving contexts, there is room for further control and improvement. The unpredicted drop in happiness scores for intrinsic motivations from lateral to downward comparisons in the success condition may be due to participants’ own insertions of relationship qualities. As described earlier, vignettes were written in such a way that others identified in the story were not labeled as having a specific relationship to the participant unless that quality was desired for the relationship content. However it is possible that participants assumed close relationships with the people in all of the scenarios. If participants did assume relationship qualities, then the unexpected results may be explained by the work of Exline & Lobel (1999, 2001). Exline & Lobel (1999) introduced a construct labeled ‘sensitivity about being the target of a threatening upward comparison’ STTUC. This sensitivity comes from the feeling that overachievement is viewed as a threat by others and is exacerbated when the possible threatened other is a friend. STTUC discomfort centers on interpersonal goals and should elicit emotional responses that are social in nature, such as empathy or guilt. An individual that finds themselves as the beneficiary of downward
comparisons made with others may experience discomfort with their advanced position. Exline & Lobel (2001) found that STTUC responses are independent of positive responses due to out performance. The positive effects of succeeding are occurring in tandem with discomfort due to outperforming peers. The significant reduction in expected happiness following intrinsic vignettes found in the current study could be due to this type of discomfort, resulting from the participants assuming personal relationships with others mentioned. Furthermore, the unexpected 2-way interaction between Outcome and Comparison direction in the current study suggests that STTUC may follow successes rather than failures. Simply appearing superior might not be enough to create the discomfort.

Future Directions

The concept of STTUC is more applicable to intrinsic motivations than extrinsic ones. Intrinsic motivations are more closely linked to interpersonal and social qualities that are indicative of human needs, and may elicit STTUC naturally. Further research using a paradigm similar to the current study could make use of an intrinsic goal different from relations with others, such as community building, which may reduce tendencies to experience possible STTUC discomfort. Instructions could also be made that lead participants to consider others mentioned in the vignettes as not related or associated with the individual. Because the focus of this theory is on personal goal striving and comparisons with generalized others, attempts should be made to control the possible influence of discomfort due to threatening upward comparisons. STTUC theory has shown discomfort in participants when they succeed, and that this discomfort is
independent of positive feelings associated with success (Exline & Lobel, 2001). In the current study, the same reductions in expected happiness scores were not found for downward comparisons in the failure condition despite participants again being the target of potentially threatening upward comparisons. Instead, happiness boosts were observed similar to previous theory and research (Wills, 1981; Wood, Taylor & Lichtman, 1985). Additional controls should be implemented in the success condition in order to reduce the possibility of STTUC having an effect on expected happiness outcomes. Further research should also attempt to replicate such STTUC related interactions, because these seem to be in contrast to positive relationships between intrinsic striving and happiness. By controlling for comparisons as well as success, a similar research paradigm as that reported in the current study would have the opportunity to not only verify the existence of STTUC, but also to gauge its prevalence and likelihood based on participants’ comparison tendencies within intrinsic striving.

The possibility of STTUC effects brings up an important concern regarding comparison targets. If people are engaging in social comparisons relevant to their goals and motivations, are they comparing themselves with figureheads of success in those goals or against other people with whom they maintain relationships? Comparisons with familiar others would have a chance to elicit STTUC effects, while comparisons with generalized others would not. Furthermore, comparing oneself with friends and family may elicit guilty feelings, but may also provide comparison targets that are less likely to appear more successful. Targets of comparisons may also change depending on the specific goal. It is possible that we engage in comparisons with our friends and family
when evaluating intrinsic goals, and non-related targets when engaging in extrinsic goals. Comparisons with out-group targets have been shown to reduce the negative impacts of upward comparisons relative to image, an extrinsic domain (Martinot & Redersdorff, 2003). By further studying the targets of goal oriented comparisons, researchers will be able to gain a better understanding of the motive behind these comparisons, and possibly discover further functional differences between extrinsic and intrinsic motivations.

Further research would also benefit from using scenarios more applicable to the participant’s own life. Structuring data collection to use examples from participants’ own experiences would enhance external validity. Experience sampling methodologies and longitudinal designs would also provide a richer data set and happiness responses to social comparisons in motivational striving that are in tune with day to day life experiences. Brickman & Campbell (1971) presented an idea born out of adaptation level theory that proposed that decreases in degree of success over time leads to dissatisfaction, despite continued successes. Over time, gains in goal striving in terms of qualitative increases over previous levels, decrease because of a lack of resources. For example, there are few truly wealthy people because of a limited amount of money available. As these individuals gain wealth they move into different rankings of wealth, with each step up the financial ladder presenting them with fewer peers and farther to go to exceed them, as well as a greater challenge in doing so. This type of extrinsic striving would result in a decrease in the beneficial difference of downward social comparisons, since previous targets are not realistic as a person progresses. As the disparity between previous and new values in goal striving (value being specific to the goal itself, be it monetary wealth or
compliments paid based on looks) decreases over time, despite continued objective success, gains will subjectively appear less successful and thus yield less happiness. Longitudinal designs would allow for the tracking of such a phenomenon across the extended timeframes and allow for a more complex picture of comparison processes in goal striving. These designs would allow researchers to follow the ebb and flow of happiness related to success comparisons over time and across more realistic scenarios. This would also allow for the use of more sophisticated statistical techniques.

Using more diverse populations would provide a better picture of how motivational striving corresponds to social comparison when engaging in goal oriented activities. Older adults may experience a shift in priorities as they develop more complex family and social networks, and a more solid sense of self. Social contact motivations have been found to decrease later in life without a reduced satisfaction with relationships (Carstensen, 1992). The current sample of undergraduate college students, showed a significantly higher emphasis on intrinsic motivations than extrinsic motivations. This period of emerging adulthood is a period of self discovery that may be associated with different needs and wants than different generations and cohorts. This is also a distinctly American sample, and cultural differences may affect the interaction of social comparisons and goal striving in ways not yet predicted. In short, motivations are likely to change with samples, a possibility that should be given further consideration.

Finally, this research paradigm purposely excluded possible effects of upward comparisons for the sake of simplicity. Lateral comparisons were used as a neutral condition against which downward conditions could be compared. Before the interaction
between social comparisons and motivational style can be coherently tied to happiness, upward comparisons should be considered. It is possible that the negative correlations between extrinsic striving and happiness are due to the frequent occurrence of discouraging upward comparisons. However, as this study has shown, comparison direction might not be predictable as previous literature suggests, a factor that enhances the necessity to consider another comparison direction in further research.

Conclusions

This study was designed to understand the nature of previously reported negative relationships observed between extrinsic motivation and happiness. By focusing on social comparison processes within motivation, it was proposed that these processes would lead to happiness outcomes that could explain that relationship. While this study was successful in discovering differing effects of social comparisons between extrinsic and intrinsic motivation, a possible explanation for the established relationships between these motivations and happiness does not seem to be reflected here. The intention was to isolate a difference in social comparisons, namely the differences between lateral and downward comparisons, and observe how these comparisons within different types of motivation influence expected happiness. It was proposed that social comparisons may create the conditions by which people begin to feel badly as a result of striving within their goals and motivations. Downward comparisons were thought to be partial criteria for happiness as a result of extrinsic success, with lateral comparisons falling short of the criteria necessary to achieve the most possible happiness from extrinsic endeavors. It was thought that making lateral comparisons might explain how intrinsic striving can yield
more happiness than extrinsic striving. In fact, happiness related to extrinsic motivation in all conditions was either not significantly different than intrinsic motivation, or significantly higher. Furthermore, intrinsic motivation did not display a significant difference when averaged across Outcome. This study was successful in demonstrating the greater impact that downward comparisons have on extrinsic motivation related happiness, but did not demonstrate a detriment to extrinsic related happiness when lateral comparisons are made. These results suggest that social comparisons are not a necessary part of extrinsic motivation, but that they are sufficient to increase happiness where success related benefits fail. If extrinsic motivational striving is related to negative affect, it is not explained by a lack of downward comparisons.
REFERENCES


APPENDIX

STUDY VIGNETTES AND INSTRUMENTS
STUDY VIGNETTES

Success/Downward Extrinsic (wealth)

You live in a middle class neighborhood and make enough money to live comfortably. Most of the people you encounter on a daily basis drive similar cars, have similar houses, and wear decently nice clothes. You work very hard at your job and do your best to be a good employee. One day you are rewarded for your hard work and receive a promotion. This entails a little more responsibility, but a much bigger pay increase. With your new pay increase you are able to buy a nicer car, wear nicer clothes, and even move into the local gated community. The same people you normally encounter now compliment you on your new wealth and expensive possessions.

Success/Downward Extrinsic (image)

The new fall semester has just started and everyone is back at school. To celebrate, a party has been planned at a nearby student house for anyone that wants to attend. Everyone knows this will be a chance to show off and impress others. You know that people will try to look their best, so you spend extra time getting ready. At the party you receive very much attention and many comments on how good you look. In fact, you seem to be receiving more compliments about your appearance than your peers, and you get the feeling that maybe you look the best out of everyone at the party.
Success/Downward Intrinsic (relationships)

It is winter break and you and your partner are on a ski trip with three other couples. The trip was planned two months in advance and everyone is very excited. Unfortunately, the trip doesn’t go as planned and many things go wrong. Through all the troubles and disappointments you and your partner manage to have a good time. You take everything in stride and focus more on enjoying each other’s company than the actual event. You notice that the other three couples aren’t handling everything as well as you two are. There are a lot of fights and harsh feelings and you get the feeling that maybe their relationships aren’t as strong as yours. After talking to your partner you conclude that you are much happier with your relationship than the others on the trip are with theirs.

Success/Downward Intrinsic (personal growth)

You and the people you were around growing up were a little wild and often engaged in reckless and risky behaviors. The responsibilities of the world were never a high priority for any of you and fun at any expense was always the goal. You often found yourself in situations where you were dependent on the reactions of others to feel good about yourself and appreciated by others. As you’ve grown up you have matured and begun to take things more seriously. You no longer need the reactions of others to feel good and are satisfied with who you are deep down inside. You have become a much more balanced person and no longer engage in cheap thrills to feel good. Other people you know haven’t grown in the same way you have and you find them to be less
mature and complete than you. You definitely get the sense that you have grown as a person more successfully than they have.

Success/Lateral Intrinsic (personal growth)

Despite your best efforts you’ve always struggled with low self-esteem. You’re not necessarily depressed, but you do tend to get down on yourself too much. Social situations are hard for you because you feel like you aren’t good enough to be liked or appreciated. You decide to get some help and enroll in a self-help group sponsored by a local clinic. Over the course of a couple months you become friends with many of the other group members. You start to feel better about yourself and as your confidence returns you are more sociable. You start hanging out with your new friends and often have conversations about the group. Everyone you talk to seems to be making similar progress as you. As you begin to appreciate yourself more and more, you notice the same changes in your friends. You all conclude that the group has been very beneficial to how each person views themselves and their own self-worth.

Success/Lateral Intrinsic (relationships)

You’ve just enrolled at a new school that is very small. The student body is very close and because you are new, you have to take some time to become a part of the group. You work hard at trying to be friendly and sociable while still being yourself, and others take notice of you quickly. Over time you begin to hang out more and more with your classmates and become accepted into the group. You begin to build very positive friendships with many of your peers and even seem to get along with those that you don’t
interact with on a regular basis. In fact, everyone at the school seems to get along well and the vibe is very positive. Everyone seems to relate well with their peers.

**Success/Lateral Extrinsic (image)**

For spring break you and your closest friends decide to go to Cancun. You all hit the gym during the preceding months in order to get in shape. When you get to the beach, you all realize that the entire group looks great. In fact, everyone on the beach seems to have put as much work into their bodies as you and your friends did. You all frequently receive compliments from other good looking people.

**Success/Lateral Extrinsic (wealth)**

You have a good job that you work very hard at. As a result of your hard work, you have a very comfortable standard of living. In fact, you would consider yourself wealthy by your society’s standards. Most of the people you associate with have a similar standard of living. You all drive nice cars, wear fashionable and expensive clothes and have big homes. As time goes by your pay increases, and so does your standard of living. It seems that as you become wealthier, your neighborhood and friends keep pace. You would conclude that your level of wealth is about even with those around you.

**Failure/Lateral Intrinsic (relationships)**

You and several of your friends have been dating your significant others for a couple of years. Now that you’re graduating college and looking for jobs it is becoming harder to maintain your relationships. Your own partner has moved to another city in
order to find a job that suits them and their education. This has placed a strain on your relationship, and you feel that things are not working out. When you turn to your other friends for advice you find out that they are having similar problems. Not everyone moved away, but now that things are different, including everything from more real world responsibility to changes from growing older, everyone seems to have a hard time holding things together. You feel like there may be several breakups coming soon, maybe for you and your friends.

*Failure/Lateral Intrinsic (personal growth)*

You attend college in the same town that you grew up in because it was your parents’ alma mater. When you graduate you decide to branch out and do something different with your life than your parents did. You decide to move away and become an independent person. Once you are on your own you have a difficult time managing yourself and are unable to keep it up for long. You end up moving back to the town you’ve always lived in. As you try to understand what happened you have many conversations with other people you know around town. You find out that many of them had similar experiences, where they tried to move away and become more independent, but failed and had to come back.

*Failure/Downward Extrinsic (wealth)*

You work at a fairly large company in a Midwest city. The company you work for is one of the largest employers in your city and is the center of much of the city’s commerce. One day the company announced that there would be massive layoffs in
order to cut costs and that only the most valuable employees would be retained. Every department is hit hard and only the best employees survive the cuts. You are one of the employees laid off, not a surprise based on your last performance review, and others that you worked with are laid off as well. You manage to find another job that doesn’t pay nearly as well as your previous job, but it keeps food on the table and pays the mortgage. The other former employees aren’t as lucky as you and are really struggling to make ends meet. Some are forced to sell their cars, and others are forced to move. Despite the fact that your standard of living isn’t nearly as comfortable as it used to be, you are still fairing better than them.

*Failure/Downward Extrinsic (image)*

After some consideration you decide that you are unsatisfied with your body and make a plan to go to the gym more often. You spend a couple months working out regularly in order to tone your body in a way you would prefer. Despite your best efforts you can’t seem to achieve the look you want. However, as you look around the gym you start to think that you are in better shape than a lot of the people there. You may not have changed the way you look, but you still think you look better than them.

*Failure/Downward Intrinsic (personal growth)*

In an attempt to bring more relaxation and understanding of yourself to your life, you enrolled in a yoga class at the local recreation center. You find the ideas and the principles behind yoga to be very interesting, but you struggle with the actual technique. It takes a great deal of effort and concentration for you to execute even the basic
positions. Your inability to catch on is frustrating you as well and you are not achieving the harmony and personal growth you were striving for. When you look around during the class, you notice that you are not the only one having trouble. In fact, you seem to be one of the better members of the class, with many of the others hopelessly lost and even more frustrated than you. While you may be struggling, most of your classmates are worse off.

*Failure/Downward Intrinsic (relationships)*

After a series of unfortunate family events, you and your four siblings have become estranged from your mother’s only sister. You had all gotten along with your aunt very well in the past, but now it seems like none of you get along with her. You can’t blame it all on her, and you realize that your relationship is just damaged. You and your aunt try to repair the relationship but can’t seem to get it back to the way it was. Things are always a little tense and awkward between you two. After talking to your siblings about it, you realize that although your relationship with your aunt is damaged, their relationship with her is much worse. They have all tried to repair the relationship as you have, but have had even less success than you.

*Failure/Lateral Extrinsic (image)*

You and a couple people are talking one day and each person decides that he or she is unhappy with the way they look. The group decides to try out a new diet that requires a lot of changes to your normal eating habits. You try it for a couple weeks but it’s just too much for you to maintain so you quit without having lost any weight. You
find out that the others have also failed to stick to their diets and haven’t lost any weight either. In the end, each person is still dissatisfied with the way they look.

*Failure/Lateral Extrinsic (wealth)*

You and several other students work together at a nearby business off of campus in order to have enough money to make ends meet. The job pays well but is difficult and hard work. After a couple weeks you are called into a meeting with your boss and fired for underperforming. You bump into those other students at a later time and find out that they were also fired the same day as you and now all of you are back to the same financial struggles as before.
ASPIRATION INDEX: IMPORTANCE SCALE

“Everyone has long-term Goals or Aspirations. These are the things that individuals hope to accomplish over the course of their lives. In this section, you will find a number of life goals, presented one at a time, and we ask you, how important is this goal to you? Please use the following scale in responding to each life goal.”

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1. To be a very wealthy person.
2. To grow and learn new things.
3. To have good friends that I can count on.
4. To successfully hide the signs of aging.
5. To have many expensive possessions.
6. At the end of my life, to be able to look back on my life as meaningful and complete.
7. To share my life with someone I love.
8. To have people comment often about how attractive I look.
9. To be financially successful.
10. To choose what I do, instead of being pushed along by life.
11. To have committed, intimate relationships.
12. To keep up with fashions in hair and clothing.
13. To be rich.
14. To know and accept who I really am.
15. To feel that there are people who really love me, and whom I love.
16. To achieve the "look" I've been after.
17. To have enough money to buy everything I want.
18. To gain increasing insight into why I do the things I do.
19. To have deep enduring relationships.
20. To have an image that others find appealing.

Wealth: 1, 5, 9, 13, 17
Image: 4, 8, 12, 16, 20
Personal growth: 2, 6, 10, 14, 18
Relationships: 3, 7, 11, 15, 19
THE IOWA-NETHERLANDS COMPARISON ORIENTATION MEASURE

"Most people compare themselves from time to time with others. For example, they may compare the way they feel, their opinions, their abilities, and/or their situation with those of other people. There is nothing particularly 'good' or 'bad' about this type of comparison, and some people do it more than others. We would like to find out how often you compare yourself with other people. To do that we would like to ask you to indicate how much you agree with each statement below, by using the following 5 point scale."

1       2      3       4            5
Disagree Strongly    Disagree    Neutral    Agree    Strongly Agree

1. I often compare how my loved ones (boy or girlfriend, family members, etc.) are doing with how others are doing.

2. I always pay a lot of attention to how I do things compared with how others do things.

3. If I want to find out how well I have done something, I compare what I have done with how others have done.

4. I often compare how I am doing socially (e.g., social skills, popularity) with other people.

5. I am not the type of person who compares often with others. (reversed)

6. I often compare myself with others with respect to what I have accomplished in life.

7. I often like to talk with others about mutual opinions and experiences.
8. I often try to find out what others think who face similar problems as I face.

9. I always like to know what others in a similar situation would do.

10. If I want to learn more about something, I try to find out what others think about it.

11. I *never* consider my situation in life relative to that of other people. (reversed)